REMARKS

Claims 1 and 4-12 are pending in the present application. Claim 1 is herein amended. Claim 39 is newly added. No new matter has been presented.

Claim Rejections - 35 U.S.C. §112

Claims 1 and 4-12 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter that was not described in the original specification.

Applicants respectfully disagree with this rejection.

Applicants note in the original specification that "substrate carbon concentration" is described as 1×10^{15} (atoms/cm^3) or higher. Further, in Figs. 4, 12, 13 and 17, the semiconductor substrate 11(21) is graphically shown and described as a whole, and includes the carbon concentration is indicated as 5×10^{16} (atoms/cm^3) or higher. Because the substrate is described as having a carbon concentration of 5×10^{16} (atoms/cm^3) or higher while referring to and illustrating the entire substrate, it would be illogical to assume that this meant that only a portion of the substrate had a minimum concentration as claimed. If this were the case, then the Figures would have shown a portion of the substrate as having a carbon concentration of 5×10^{16} (atoms/cm^3) or higher. One skilled in the art would immediately recognize that Applicants intended a carbon concentration of 5×10^{16} (atoms/cm^3) or higher *throughout the substrate*, rather than in a localized area of the substrate.

Claims 1 and 4-12 are rejected under 35 U.S.C. §112, second paragraph. Applicants herein amend claim 1 to remove the language in question.

Claim 1 is rejected for reciting "the whole area" and "the depth direction", which phrases have insufficient antecedent basis. Applicants herein amend the claims to remove the language in question.

Claim Rejections - 35 U.S.C. §103(a)

Claims 1, 4, 5 and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Asayama et al. (US 6,365,461) in view of Wenski et al. (US 6,458,688) and further in view of Takizawa et al. (US 5,734,195) and then further in view of Ishida et al. (US 6,198,157).

In the present invention, the semiconductor substrate is claimed as having a carbon concentration that is 1×10^{15} (atoms/cm^3) or higher throughout the entire substrate. According to this structure, the present invention has as high gettering ability as possible. This structure is neither disclosed nor suggested in Takizawa et al., Asayama et al., Wenski et al. and Ishida et al., alone or in combination.

The Examiner asserts that Takizawa et al. discloses carbon-implanted region 15 formed on the surface of the semiconductor substrate 11, wherein the *uniform* concentration is 1×10^{16} (atoms/cm^3) or higher. Applicants respectfully disagree with this characterization of the cited reference. Applicants note that Takizawa et al. discloses that carbon-implanted region 15 is formed on the surface of the semiconductor substrate 11, and the *peak* concentration is 1×10^{16} (atoms/cm^3) or higher. Takizawa does not disclose containing carbon at a concentration of 1×10^{15} (atoms/cm^3) or higher throughout the entire substrate. Therefore, at least this limitation is not taught or suggested by the cited combination of references.

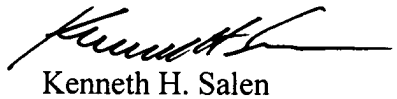
In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP



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